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SUBJECT: SOUTHWEST CHINA: SICHUAN OFFICIALS ON GREEN ENERGY

REF: BEIJING 1521, CHENGDU 062, CHENGDU 110

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11. (SBU) This cable contains sensitive but unclassified information - not for distribution on the internet.

12. (SBU) Summary: Sichuan has rich developed and potential hydro and biogas power resources, but far fewer solar and wind energy development opportunities, according to a recent presentation on "new energy" by the Sichuan Development and Reform Commission (SDRC). Nonetheless, Sichuan is expanding its alternative power generation capacity to include solar and wind projects concentrated in a few select areas. Although hydropower provides the majority of the electrical power output in the province, the SDRC says that biogas power generation is increasingly important in rural areas, and is emphasized in both national economic stimulus plan and quake reconstruction investments. What Sichuan's alternative energy expansion means for potential investment opportunities remains unclear. The Sichuan New Energy Promotion Association, established in December 2008, is -- according to its statutes -- mandated to assist with linkages between potential investors and local partners but, to date, we have seen little evidence of substantive action. End summary.

Hydropower	will	remain	primary	energy	source	

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 $\underline{\mbox{1}}{\mbox{3}}.$ (SBU) During a recent meeting with us, Wu Jianzhong, Deputy Director of the Energy Division of the Sichuan Development and Reform Commission, provided an overview of Sichuan's "new energy" projects, noting that the province's strengths lie in hydro and biogas electric power production. stressed Sichuan's extensive potential hydropower capacity, with 781 rivers that individually each could produce more than 1 gigawatt (GW) of power. In total, he said, the province has 144 GW of potential (yun cang liang) hydropower, 120 GW of which can be technically exploited, and 103 GW that can be economically exploited. Wu said Sichuan exploited 35 GW of electric power in 2008, of which 22.5 GW came from hydropower. Provincial statistics show that these numbers are roughly unchanged from the previous year. Sichuan, however, is actively expanding hydropower production. In addition to about 50 small-medium hydropower projects specified in the current Five Year Plan (2005-2010), two major additional hydropower stations on the

Jinsha River, Xiluodu and Xiangjiaba, are currently under construction. When completed, their combined capacity is estimated at 18.6 GW. (Note: China's Ministry of Environmental Protection on June 11 ordered the suspension of two other hydropower stations on the Jinsha River, at Ludila and Longkaikou, citing inadequate review of their environmental impact.)

~but emphasis on bio-gas power generation is increasing

- 14. (U) Although still occupying a very small proportion of Sichuan's overall electricity production, Wu emphasized the expansion of biogas energy projects throughout the province. Wu said biogas is particularly beneficial to Sichuan's farmers who can, with an 8-10 cubic meter biogas pit, save 800 to 1,000 RMB (USD 117-147) on fuel and 150 RMB (USD 22) on fertilizer annually, significant amounts in rural Sichuan where per capita incomes average just over USD 600 annually. By the end of 2008, Wu said that roughly 30 percent of the 14.3 million rural households that could set up biogas have already done so. A separate consulate contact who has installed biogas power generation on his farm in Sichuan told us that an individual farmer could install a pit big enough for his needs, about 12 kilowatts (KW), for between 2,000 4,000 RMB (USD 293 585).
- 15. (U) The May 2008 earthquake caused damage to 520,000 biogas pits, about 200,000 of which have been repaired to date, Wu reported. Beyond these immediate repair needs, the \$586 billion national financial stimulus plan and earthquake reconstruction funding are both playing a role in Sichuan's biogas expansion. Out of the 3 billion RMB (USD 439 million) allocated by the

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central government for national biogas development, Wu said, Sichuan is receiving support for an additional 120,000 households to benefit from biogas, but did not provide further specifics. He also cited a \$1.2 billion World Bank, French Development Agency and International Agricultural Development Fund project for quake reconstruction, of which \$85 million is for biogas development.

16. (U) Sichuan has set up larger-scale biogas distribution and power production, Wu noted. Many townships have biogas service stations that are able to provide sufficient biogas for 300-500 households. Additionally, Sichuan has five biogas electric power stations that each produce 24 - 30 megawatts. These power stations can be transmitted electricity to the power grid. Wu said that economic electric power generation will help encourage development of biogas power that utilizes some of the province's 11.5 million tons of animal waste and approximately 5 million tons of wheat straw.

Ethanol Plans Still on the Books

17. (U) In addition to biogas, Sichuan is developing its biodiesel and ethanol fuel capacity, Wu reported. On the biodiesel front, the province relies on two types of trees grown in Panzhihua and Liangshan in the south for feedstock. He referenced a plan by the provincial government and China National Petroleum Corporation (CNPC) to jointly produce 100,000 tons of bio-diesel and 600,000 tons of ethanol fuel annually. Wu said this would include a new forestry base with an area of 9

million mu (600,000 hectares). (Note: This plan appears to be based on an agreement that the state-run China Daily newspaper reported was signed with CNPC in late 2006.) He also said that Sichuan enjoys "good conditions" for expanding ethanol fuel production. Annually, 30 percent of the 17-18 million tons of annual sweet potatoes produced in the provinces rot before they can be consumed.

Solar and wind potential relatively weak, but still expanding

- 18. (SBU) Wu emphasized that despite Sichuan's relatively limited potential for solar and wind power generation, they are nonetheless putting efforts into development. He said the autonomous prefectures of Ganzi, Aba, Liangshan, and Panzhihua each have 1,500-2,700 hours of sunshine annually. Sichuan currently has 46 photovoltaic power stations, but Wu did not say how much power these stations generated. He noted that 109,000 households in Ganzi benefited from solar power in 2008, while 11,000 households in Aba utilized solar stoves. Several local press reports in recent months have reported on new solar power station projects, including one in Xichang, Liangshan's main city, and another in Daying. (Note: Wu's discussion of areas with solar energy potential was somewhat more expansive than that described by a Dongfang Electric executive to Congenoff and reported in reftel B.)
- ¶9. (U) Local media have also reported on Sichuan's increasing involvement in producing inputs for the solar industry. A June 19 China Commercial News report describes Leshan, south of Chengdu, as having become "China's Silicon Valley" due to the large number of factories there producing poly-silicon for use in photovoltaic technology. According to the article, Tongwei Company is the biggest producer there, currently producing 1,000 tons annually and with plans to expand to 6,000 tons within three to five years and become China's biggest poly-silicon producer. Leshan's annual output of poly-silicon is expected to more than double this year from 4,560 tons in 2008 to about 10,000 tons in 2009, the article continued.

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¶10. (SBU) Sichuan has 3 GW of potential wind-generated electric power, Wu said. The areas which are rich in wind include the Anning River region in Liangshan autonomous prefecture, areas along the Min River in central Sichuan, and the Ruoergai area of Aba autonomous prefecture. A demonstration wind power station is to be set up in Dechang County, Liangshan, with a capacity of 50 megawatts. If successful, similar projects will be introduced in the other appropriate areas of Sichuan, Wu told us.

Sichuan	New	Energy	Promotion	Association	unimpressive	so	far

11. (SBU) Separately, a provincial New Energy Industry Promotion Association (Sichuan Sheng Xin Nengyuan Chanye Cujinhui), was registered as a non-government organization in December, 2008, with the approval of the provincial government's Economic Commission (Sichuan Sheng Jingji Weiyuanhui). (Note:

The Association's advisory and expert commissions' membership, heavily represented by party leaders, government officials, official research institutes, and state-owned enterprises, indicates that it is "non-government" in name only.) According to its statutes, it is tasked with providing consulting services to both domestic and foreign enterprises to supply information on Sichuan's overall new energy situation and assisting with the establishment of cooperative linkages with potential local partners. However, while its establishment is indicative of the new priority placed on these industries, it remains unclear whether it will play an active or substantive role. Its main activities to date seem to have consisted of arranging visits by several of its leaders to local energy enterprises, and its leadership has so far remained unwilling to engage with our Foreign Commercial Service, for example. It is possible that the Association was set up by provincial leaders to help position Sichuan to take advantage of central government resources in support of green energy, rather than as a genuine conduit for private sector investment. BOUGHNER